



SLW/6LS

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicants:** Jonathan B. Baell, et al.

**Examiner:** Unassigned

**Serial No.:** 10/507,925

**Art Unit:** 1615

**Filed:** September 16, 2004

**Docket:** 18223

**For:** THERAPEUTIC ION CHANNEL  
BLOCKING AGENTS AND  
METHODS OF USE THEREOF

**Dated:** September 7, 2005

**Confirmation No.:** 6810

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R §§1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. Wulff H. et al., "Nonpeptide Bivalent Blockers of Kv1.3 Channels Based on the Benzofuran Pharmacophore", *The Physiologist*, 42(A-12), Abstract 5.67 (1999);
2. Wulff H. et al., "Nonpeptide Bivalent Blockers of Kv1.3 Channels Based on the Benzofuran Pharmacophore", *Poster Abstract 1078 from Pharmaceutical Institute, Kiel, Germany* (1999);

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**CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 7, 2005

Frank S. DiGiglio

3. Beeton C. et al., "Selective Blockade of T Lymphocyte K<sup>+</sup> Channels Ameliorates Experimental Autoimmune Encephalomyelitis, a Model for Multiple Sclerosis", *Proc. Natl. Acad. Sci. USA*, 98(24):13942-13947 (2001);
4. United States Patent No. 5,494,895, dated February 27, 1996 to Garcia et al.;
5. United States Patent No. 6,051,590, dated April 18, 2000 to Bao et al.;
6. United States Patent No. 6,077,680, dated June 20, 2000 to Kem et al.;
7. PCT International Publication No. WO 97/16438, published May 9, 1997;
8. PCT International Publication No. WO 97/16437, published May 9, 1997;
9. Baell J.B. et al., "Khellinone Derivatives as Blockers of the Voltage-Gated Potassium Channel Kv1.3: Synthesis and Immunosuppressive Activity", *J. Med. Chem.*, 47:2326-2336 (2004);
10. Cianci J. et al., "Khellinone Derivatives as Blockers of the Kv1.3 Potassium Channel", *Poster Abstract for Connect 2005, Sydney, Australia*, (2005); and
11. Baell J.B. et al., "Khellinone Derivatives as Blockers of the Kv1.3 Potassium Channel", *J. Med. Chem.*, 47:2326-2336 (2004).

Reference No. 1 was cited in a Search Report dated June 26, 2003 received from the Australian Patent Office. The relevance of reference no. 1 has been described in the Search Report. The relevance of above-identified reference nos. 1, 3-8 has been described in the specification. Applicants are submitting copies of above-cited reference nos. 1-3, 7-11, together with a copy of the Search Report. In accordance with the waiver of 37 C.F.R. § 1.98 (a)(2)(i) in effect as of June 30, 2003, applicants are not required to submit copies of the above-cited U.S. Patent references.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(b), no statement or fee is required.

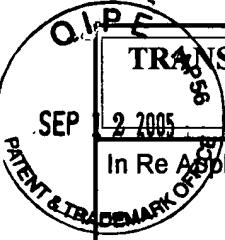
Respectfully submitted,

  
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| Form PTO-1449<br>(REV. 7-80) U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE   |     | Atty. Docket No. (Optional)   | Application Number |               |       |          |                              |
|---|-----|---|--------------------|---------------|-------|----------|------------------------------|
| <b>LIST OF PRIOR ART<br/>CITED BY APPLICANT</b>   |     | 18223   | 10/507,925         |               |       |          |                              |
| (Use several sheets if necessary)   |     | <b>Applicant(s)</b><br>Jonathan B. Baell, et al.<br><b>Filing Date</b><br>September 16, 2004  |                    |               |       |          |                              |
| <b>U.S. PATENT DOCUMENTS</b>  |     |   |                    |               |       |          |                              |
| EXAMINER INITIAL*   |     | DOCUMENT NUMBER   | DATE               | NAME          | CLASS | SUBCLASS | FILING DATE (if appropriate) |
|   | AA  | 5,494,895   | 2/27/96            | Garcia et al. |       |          |                              |
|   | AB  | 6,051,590   | 4/18/00            | Bao et al.    |       |          |                              |
|   | AC  | 6,077,680   | 6/20/00            | Kem et al.    |       |          |                              |
| <b>FOREIGN PATENT DOCUMENTS</b>   |     |   |                    |               |       |          |                              |
|   | REF | DOCUMENT NUMBER   | DATE               | COUNTRY       | CLASS | SUBCLASS | TRANSLATION                  |
|   |     |   |                    |               |       |          | YES                          |
|   |     | WO 97/16438   | 5/9/97             | PCT           |       |          | ✓                            |
|   |     | WO 97/16437   | 5/9/97             | PCT           |       |          | ✓                            |
| <b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)   |     |   |                    |               |       |          |                              |
|   |     | Wulff H. et al., "Nonpeptide Bivalent Blockers of Kv1.3 Channels Based on the Benzofuran Pharmacophore", <i>The Physiologist</i> , 42(A-12), Abstract 5.67 (1999)   |                    |               |       |          |                              |
|   |     | Wulff H. et al., "Nonpeptide Bivalent Blockers of Kv1.3 Channels Based on the Benzofuran Pharmacophore", <i>Poster Abstract 1078 from Pharmaceutical Institute, Kiel, Germany</i> (1999)  |                    |               |       |          |                              |
|   |     | Beeton C. et al., "Selective Blockade of T Lymphocyte K <sup>+</sup> Channels Ameliorates Experimental Autoimmune Encephalomyelitis, a Model for Multiple Sclerosis", <i>Proc. Natl. Acad. Sci. USA</i> , 98(24):13942-13947 (2001) |                    |               |       |          |                              |
|   |     | Baell J.B. et al., "Khellinone Derivatives as Blockers of the Voltage-Gated Potassium Channel Kv1.3: Synthesis and Immunosuppressive Activity", <i>J. Med. Chem.</i> , 47:2326-2336 (2004)  |                    |               |       |          |                              |
|   |     | Cianci J. et al., "Khellinone Derivatives as Blockers of the Kv1.3 Potassium Channel", <i>Poster Abstract for Connect 2005, Sydney, Australia</i> , (2005)  |                    |               |       |          |                              |
|   |     | Baell J.B. et al., "Khellinone Derivatives as Blockers of the Kv1.3 Potassium Channel", <i>J. Med. Chem.</i> , 47:2326-2336 (2004)  |                    |               |       |          |                              |
| EXAMINER  |     |   | DATE CONSIDERED    |               |       |          |                              |
| <small>* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small> |     |   |                    |               |       |          |                              |





**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
(Under 37 CFR 1.97(b) or 1.97(c))**

Docket No.  
**18223**

In Re Application Of: **Jonathan B. Baell, et al.**

| Application No.   | Filing Date               | Examiner          | Customer No. | Group Art Unit | Confirmation No. |
|-------------------|---------------------------|-------------------|--------------|----------------|------------------|
| <b>10/507,925</b> | <b>September 16, 2004</b> | <b>Unassigned</b> | <b>23389</b> | <b>1615</b>    | <b>6810</b>      |

Title:

**THERAPEUTIC ION CHANNEL BLOCKING AGENTS AND METHODS OF USE THEREOF**

Address to:  
**Commissioner for Patents**  
P.O. Box 1450  
Alexandria, VA 22313-1450

**37 CFR 1.97(b)**

1.  The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2.  The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b), provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

- the statement specified in 37 CFR 1.97(e);

**OR**

- the fee set forth in 37 CFR 1.17(p).



TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT  
(Under 37 CFR 1.97(b) or 1.97(c))

Docket No.  
18223

In Re Application of: Jonathan B. Baell, et al.

| Application No. | Filing Date        | Examiner   | Customer No. | Group Art Unit | Confirmation No. |
|-----------------|--------------------|------------|--------------|----------------|------------------|
| 10/507,925      | September 16, 2004 | Unassigned | 23389        | 1615           | 6810             |

Title:

**THERAPEUTIC ION CHANNEL BLOCKING AGENTS AND METHODS OF USE THEREOF**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- A check in the amount of \_\_\_\_\_ is attached.
- The Director is hereby authorized to charge and credit Deposit Account No. 19-1013/SSMP as described below.
- Charge the amount of \_\_\_\_\_  
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 Charge any additional fee required.
- Payment by credit card. Form PTO-2038 is attached.

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

**Certificate of Transmission by Facsimile\***

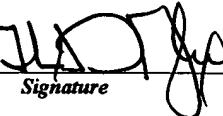
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September 7, 2005

(Date)

  
*Signature of Person Mailing Correspondence*

Frank S. DiGilio

\_\_\_\_\_  
*Typed or Printed Name of Person Mailing Certificate*

Dated: September 7, 2005

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